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국제학석사학위논문

Roles and Donor's Private Sector Development Involvement of Development Finance Institutions in Comparison with ODA

공적개발원조와 비교한 개발금융의 역할과
공여국의 민간부문개발 연관성

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Roles and Donor's Private Sector Development Involvement of Development Finance Institutions in Comparison with ODA

A thesis presented

by

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A dissertation submitted in fulfillment of
the requirements for the degree of
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Roles and Donor's Private Sector Development Involvement of Development Finance Institutions in Comparison with ODA

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ABSTRACT

Roles and Donor's Private Sector Development Involvement of Development Finance Institutions in Comparison with ODA

The study aims to identify the roles of Development Finance Institutions (DFIs) and to find out the linkage between DFI investment and donor's private sector development. First of all, each European donor's ODA and DFI investments are compared at sector level to uncover the unique roles of the two financial instruments. The result of the analysis suggests that ODA and DFI investments are walking on different paths complementing each other. Specifically, ODA funds are invested into the sectors with humanitarian purposes, whereas DFIs concentrate on promoting corporate activities through investments in banks, investment companies, renewable energy projects and agribusinesses. In the case of Germany, ODA and DFI investment intersect in a few important sectors. However, in general, it can be seen that the functions of both means are separate from each other, like other countries.

The analysis also suggests that DFI investment and donor's private sector development are closely tied to each other. In particular, the cases of the UK, Norway and Denmark support that the investments of DFIs are closely linked to the private sector development of the donor country. Furthermore, in Norway and Denmark, the share of equity provision was overwhelmingly higher than other countries, especially in projects where donor's interests are involved in. This shows that the two countries are more actively and explicitly pursuing their own interests through DFI operations. Although there are limitations in grasping all the interests considered for each DFI project, the analysis additionally confirms that the above-mentioned linkages are also viewed in other donors' cases.

Keyword: Development Finance, Development Finance Institutions, Private Sector Development, Donor's Private Sector
Student Number: 2018-22386

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LIST OF ABBREVIATIONS

BIO: Belgian Development Finance Institution

CDC: United Kingdom's Development Finance Institution

COFIDES: Spanish Development Finance Institution

DEG: German Development Finance Institution

DFI: Development Finance Institution

EDFI: European Development Finance Institutions

FMO: Dutch Development Finance Institution

Finnfund : Finnish Development Finance Institution

IFU: Dannish Development Finance Institution

Norfund: Norwegian Development Finance Institution

ODA: Official Development Assistance

OeEB: Austrian Development Finance Institution

Proparco: French Development Finance Institution

SIMEST: Italian Development Finance Instituion

SIFEM: Switzerland's Development Finance Institution

Swedfund: Swedish Development Finance Institution

1. INTRODUCTION

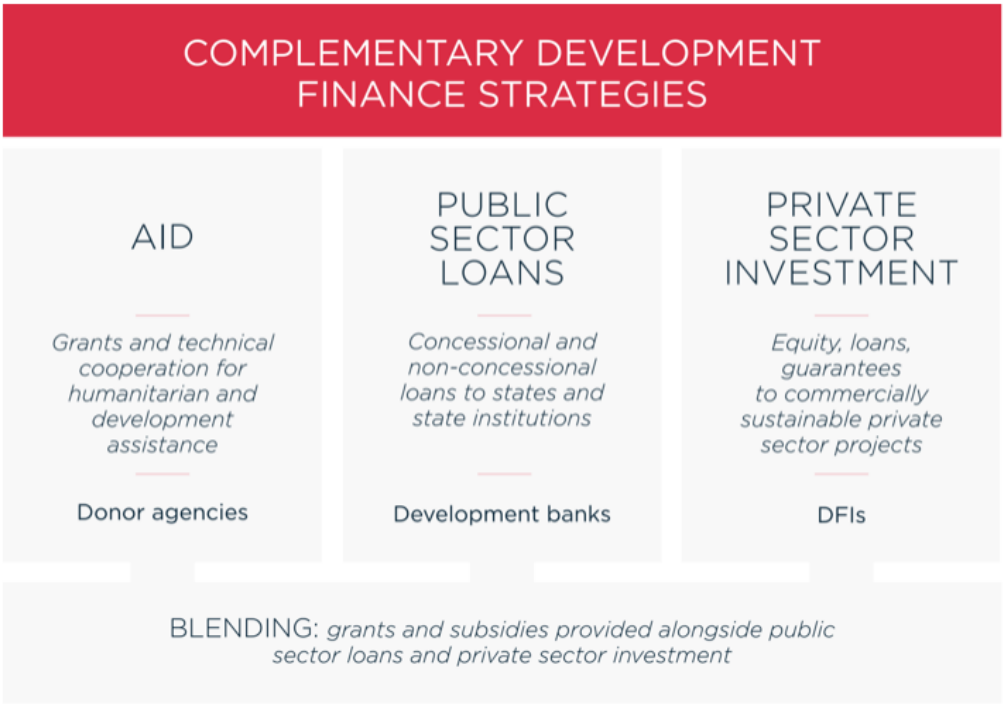
1.1. Definitions

1.1.1. Development Finance

The definition of development finance is conceptualized in various ways as the notion can be used in multiple contexts and uses. Sometimes development finance is used as a concept compared to ODA which refers to financial products with commerciality. Or, it can be defined as all kinds of development loans including concessional ODA loans. Moreover, in a broader term, development finance encompasses all kinds of financial and investment resources with the purpose of private sector development in recipient countries. Even broader, Jeong (2013), in his research, describes development finance as "all financial instruments and services aimed at the development of developing countries occurring at the level of development cooperation." In other words, if any form of financial cooperation happens with the purpose of facilitating the development of recipient country, it will be classified as development finance regardless of the financial instruments that it adopts. Thus, it is evident that the scope of development finance ranges from narrow definition

to broad and inclusive term that covers every financial flow that meets certain forms and objectives.

The EDFI, an association of Development Finance Institutions (DFI) in Europe, adopts a rather comprehensive definition of development finance. As the below picture (Picture 1) suggests, the association classifies development finance into three different categories. The three main channels of development finance are (1) aid, (2) public sector loans and (3) private sector investment. Conventional ODA, which consists of ODA grants and ODA loans, falls into the first two categories. That is, grants given to developing countries are covered in "Aid" category, and loans that meet the concessionality are included in "Public Sector Loans." Also, loans that do not meet the concessionality, namely Other Official Flows (OOF), make up the other part of "Public Sector Loans" category. However, there is another pillar within development finance that covers the financial flows to private sectors of developing countries. These investments aim to promote private sector development in developing countries which is the fundamental source for sustainable and long-term economic development. These investment operations to the private sector in developing countries are done through the DFIs. This study researches the financial activities of European DFIs.



PICTURE 1: EDFI's CATEGORIZATION OF DEVELOPMENT FINANCE[1]

1.1.2. European Development Finance Institutions (EDFIs)

European countries have one or more DFIs that support the recipient partners' private sector development. In Europe, there are fifteen different DFIs in total, and these institutions make up the EDFI mentioned above. Table 1 displays the descriptive information of the members of the EDFI. Besides Belgium which has a binary DFI

[1] EDFI | European Development Finance Institutions. (2019). Retrieved 27 November 2019, from https://edfi.eu/

structure (BIO and SBI), each country has one DFI that operates with the mission of fostering private sector development in developing countries. In relation to DFIs' ownership structure, more than half of the DFIs are solely owned by the public sector. DEG (Germany), CDC (United Kingdom), Norfund (Norway), BIO (Belgium), OeEB (Austria), SIFEM (Switzerland), SIMEST (Italy), IFU (Denmark) and Swedfund (Sweden) are the examples of the DFIs which have a fully-government-owned structure. On the other hand, the remaining institutions have a combined ownership structure where private owners as well as public owners play a key part in decision making. The examples of the DFIs that have a partly-government-owned structure are Proparco (France), FMO (Netherlands), Finnfund (Finland), SBI (Belgium), COFIDES (Spain) and SOFID (Portugal). These ownership structures affect the risk appetites that the DFIs have. Thus, knowing DFI's ownership structure is important because it directly influences the characteristics of DFI's daily operations.

DFI	**Country**	**Ownership Structure**	**Sector[2]**	**Tied to National Interests**
FMO	Netherlands	Dutch government (51%) and commercial banks, trade unions, and others (49%)	F, I, A	Untied
DEG	Germany	German development bank (KfW, 100%)	A, F, I, M, SME	Untied
Proparco	France	French development agency (AFD, 64%)	F, I, A, S	Untied
CDC	United Kingdom	UK government (100%)	F, I, S	Untied
COFIDES	Spain	Spanish government	I, A, M, SME,	Spanish

[2] Sectors: I=infrastructure; F=financial services; A=agribusiness; M=manufacturing; SME=small and medium-sized enterprises; S=services

		(54%), Spanish banks (45%), and CAF (1%)	S	Interest Required
Norfund	Norway	Norwegian government (100%)	I, F, A	Untied
OeEB	Austria	Austrian export credit agency (Oesterreichische Kontrollbank AG, 100%)	F, I, A	Untied
SIMEST	Italy	Italian national promotional bank (CDP, 100%)	S, I, A	Italian Interest Required
BIO	Belgium	Belgian government (100%)	F, SME, I	Untied
IFU	Denmark	Danish government (100%)	I, F, A	Danish Interest Required
Finnfund	Finland	Finnish government (93%), Finnvera, and Confederation of Finnish Industries	F, I, A	Finnish Interest Required
SIFEM	Switzerland	Swiss government (100%)	F	Untied
Swedfund	Sweden	Swedish government (100%)	F, I, A	Untied
SBI	Belgium	Belgian government (63%), and private financial institutions	S, A, I	Belgian Interest Required
SOFID	Portugal	Portuguese government (60%), and four Portuguese banks	I, S, A	Portuguese Interest Required

TABLE 1: KEY FEATURES OF EUROPEAN DFIs[3]

With regard to sectoral distribution, Savoy et al. (2016) classifies the investments of the DFIs based on the six-category-system of sector classification. As it is seen through the "Sector" column in Table 1, "Infrastructure", "Financial Services" and "Agribusiness" are the three sectors that are commonly seen among the DFIs. Similarly, Kingombe et al. (2011) analyzes the sectoral distribution of DFI investments

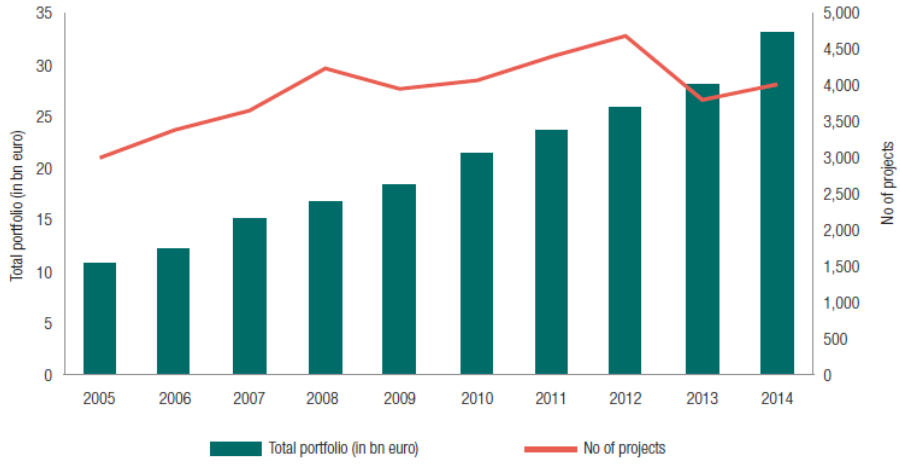
[3] Savoy et al. (2016). Development Finance Institutions Come of Age: Policy engagement, impact, and new directions. CSIS.

based on the five-sector-system using 2009 DFI portfolios. However, both studies do not provide detailed knowledge on what sectors are promoted in developing countries through DFIs' financial investments.

"Tied to National Interests" column in Table 1 gives information about the connection between DFI investments and donor's private sector involvement. Some DFIs' operations are tied to the national interests of the donors. Officially, the investments of Finnfund (Finland), SBI (Belgium), SIMEST (Italy), IFU (Denmark), COFIDES (Spain) and SOFID (Portugal) are designed to promote not only the private sector development of recipient countries, but also the donors' private sector expansion in recipient countries. However, Jeong (2015) suggests that similar scenarios are also possible for other DFIs' financial engagements. According to Jeong (2015), in his in-depth interview with Exim Bank Tanzania, one of key beneficiaries of DFI investments in Africa, linking local beneficiaries that receive DFI funding with the companies in donor countries is possible depending on the sector and partner. For example, when DEG provides funding to Exim Bank Tanzania, oftentimes DEG provide a loan with the condition to lend to German exporters (Jeong, 2015). Therefore, the linkage between DFI investment and donor's efforts to tie its national interests exist, and this connection is well blended and represented in DFI's investment strategy.

1.1.3. Recent Trend of DFI Investment

Graph 1 displays the trend of integrated portfolio of EDFIs from 2005 to 2014. The bar chart reflects the amount of aggregated portfolio. The overall trend suggests that DFIs investment are rapidly increasing over time. In 2005, EDFI total portfolio reaches up to around 10 billion Euros. However, the figure almost tripled in 2014 reaching over 30 billion Euros. EDFIs' investment in terms of project number also follows the similar trend. Although there are some ups and downs in project number, the general trend of DFI investment demonstrates that European countries are actively expanding the DFI activities over the course of time.



GRAPH 1: EDFI PORTFOLIO AND NUMBER OF PROJECTS (2005-2014)[4]

[4] Massa et al. (2016). The Macroeconomic Effects of Development Finance Institutions in sub-Saharan Africa. Overseas Development Institute.

DFI	Country	New Commitments	New Commitments (projects)	Portfolio	Portfolio (projects)
FMO	NLD	1853.3	168	10829.5	910
DEG	DEU	1244.9	79	8413.5	749
Proparco	FRA	1125.5	67	6578.9	480
CDC	GBR	1120.9	22	7017.7	208
COFIDES	ESP	366.2	44	1012.1	221
Norfund	NOR	291.3	15	1840.4	129
OeEB	AUT	271.4	19	1138.4	83
SIMEST	ITA	250.4	35	2453.5	516
BIO	BEL	135.7	22	727.7	153
IFU	DNK	104.1	21	669.2	211
Finnfund	FIN	97.1	18	704.3	161
SIFEM	CHE	85.4	10	649.4	84
Swedfund	SWE	48.0	5	439.9	91
SBI	BEL	9.4	7	25.7	25
SOFID	PRT	2.3	2	12.9	17

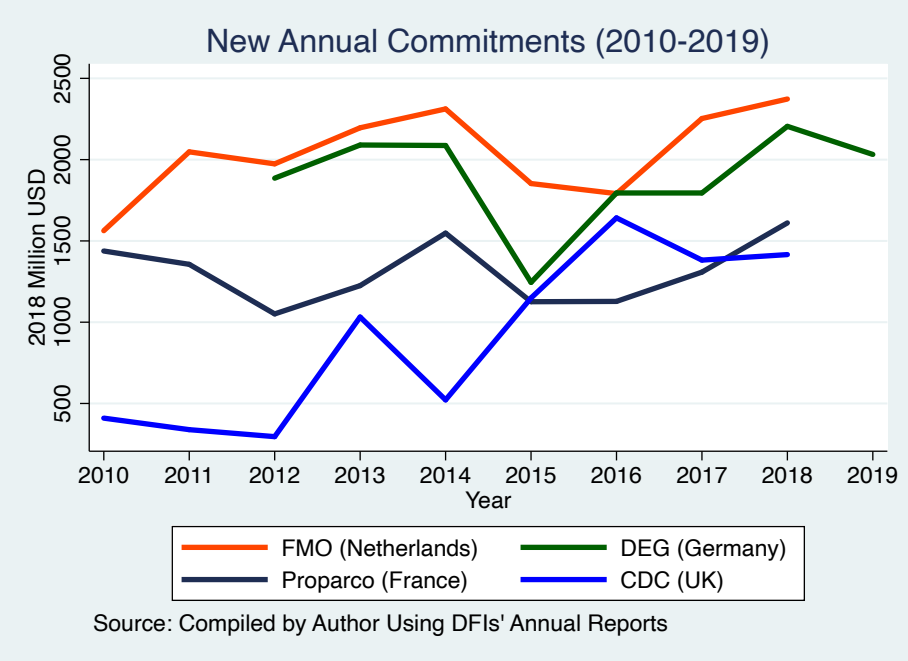
TABLE 2: 2015 INVESTMENT OF EDFIs[5] (UNIT: 2018 MILLION USD)

DFI performance by individual institution in 2015 is laid out in Table 2, and the table is sorted in descending order by new commitment figure. FMO is first to invest in the private sector of developing countries where its new commitment in 2015 reaches 1853.3 million dollars. Also, FMO outpaces its counterparts in other figures provided through Table 2. Next, DEG, Proparco and CDC follow FMO with annual new commitment measuring around 1200 million dollars. One noticeable feature is that the number of CDC's projects is relatively lower than other similar-sized DFIs. This indicates that CDC's individual project size is clearly larger than that of other similar-

[5] EDFI. (2016). Flagship Report. EDFI.

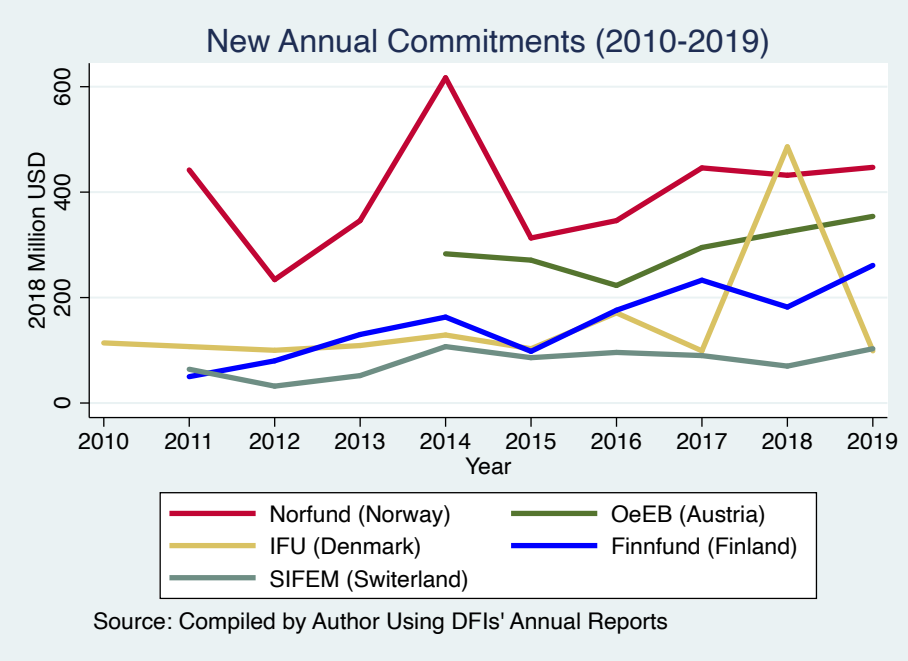
sized DFIs. In total, the 4 institutions are the major investors (hereafter these institutions will be grouped as Group 1 DFIs) in developing countries' private sectors.

The figures from the table show that there is a dividing line between Group 1 DFIs and other institutions based on commitment and portfolio size. For the sake of explanation, DFIs other than Group 1 DFIs are clustered into Group 2 DFIs. COFIDES, Norfund, OeEB and SIMEST are following the Group 1 DFIs with investment amounts reaching from 250 to 400 million dollars in their new commitments. Next, BIO, IFU, Finnfund, SIFEM and Swedfund are the DFIs with commitment levels from 50 to 150 million dollars. Lastly, SBI and SOFID are the investors with minuscule amount of investment volume.



GRAPH 2: NEW ANNUAL COMMITMENTS OF GROUP 1 DFIs

Graph 2 below displays the new annual commitments of Group 1 DFIs from 2010 to 2019. The trend suggests that the ranking among the 4 institutions are identical to the ranking shown in Table 2. FMO ranks the first place with an increasing trend with average growth rate of 5%. DEG and Proparco follow FMO with both institutions with 1% average growth rate within the time span. CDC is the fastest growing in terms of its annual commitments within Group 1 DFIs. The average growth rate of CDC's new annual commitments is 17%.



GRAPH 3: NEW ANNUAL COMMITMENTS OF GROUP 2 DFIs

Graph 3 suggests the annual new commitment trend of Group 2 DFIs. Only 5 institutions' data is shown because of the limited data. As the data suggests, the trend

seems to vary between DFIs. Despite the fluctuations, Norfund has a stable movement along the 400-million-dollar line with 0% of average growth rate throughout the entire time period. OeEB displays a rather stable increasing trend having 5% of annual growth rate. Intriguingly, Finnfund shows the fastest increasing trend as its average growth rate is 17%. IFU's new annual commitments, however, are stable remaining around 100 million dollars throughout the entire period with a sudden surge in 2018 (486 million dollars). Finally, SIFEM's investment levels remain around 100 million dollars throughout the entire time period with 1% of average growth rate.

To summarize, EDFIs' investment is increasing with a rapid pace over time. Also, this section separated the DFIs into two groups (Group 1 & Group 2) with regard to the magnitude of their investments. Furthermore, the trends of new commitments are showing diverse flows. CDC and Finnfund are the institutions with the fastest average growth rate. FMO and OeEB show a stable growth rate of 4% on average. Although ups and downs are detected throughout time, other institutions have kept their commitment levels on a similar scale.

1.2. Literature Review

The mainstream literature on DFIs focuses on assessing the effects of DFI investment on various factors. Te Velde (2011) examines the effect of DFI investment on investments to developing countries during financial crises and in post-conflict

times. The study suggests via empirical evidences that DFI investment has positive effects on creating stable investment environment in fragile and conflict-affected developing countries. Rørvik (2011) also stresses the importance of DFIs' willingness to take risk in creating stable investment environment in developing countries, and risk-taking attitude of DFIs alters other potential investors' expectations. Furthermore, a quantitative analysis done by Jouranjean et al. (2013) demonstrates that DFI investments are crucial in creating jobs and increasing labor productivity in developing countries. Moreover, the linkage between DFI investment and labor productivity increase renders a foothold for structural transformation in developing countries as Massa et al (2016) argues that "positive effect on economic growth and labor productivity, confirms the transformational potential of these interventions." In addition, the roles of multilateral DFIs' investments to economic growth in developing countries are highlighted (Messa, 2011).

Researches on defining the characteristics of DFI investment are very scarce. Kingombe et al. (2011) multi-dimensionally compares all DFIs portfolios using 2009 portfolio data. Also, Massa et al. (2016) suggests descriptive statistics on DFI investments. However, these researches adopt a rather comprehensive classification. The five-sector classification[6] is used in the former research, and the latter uses the six-sector classification[7]. Additionally, no research has been done to clarify the

[6] Five Sectors: Financial Sector, Infrastructure, Agribusiness, Industry/Manufacturing, Other

[7] Six Sectors: Financial Sector, Infrastructure, Agribusiness, Industry/Manufacturing, Services, Other

relationship between DFI investment and donor's private sector expansion in developing countries.

1.3. Research Question

Since the main discussions on DFIs are inclined to illuminate the effects of DFI investment on various matters, the detailed features of DFI investment are hidden under the veil. The previous studies on DFIs only gives a glimpse of each institution's operations. Therefore, with the studies done so far, it is impossible to elucidate the roles of DFI investment within the purview of development finance. Also, no research has touched upon the tie between DFI investment and donor countries' private sector expansion in developing countries.

Considering the scarcity of empirical research on the topic, the main purpose of this study is to clarify the following question: "What do the DFIs do? And, how deeply are the interests of donor's private sector development involved in DFI investment?" The study aims to answer the above questions through empirical analysis based on the newly constructed dataset using the portfolios of the European DFIs. The dataset uses the eighteen-sector classification system made by the author based on the sector categorization of the OECD CRS dataset (details on sectors are shown in appendix tables). A closer look at the dataset will be presented in the next section.

Chapter 3.1. examines the major roles of DFI activities by conducting a comparative analysis between ODA and DFI investments. The analysis aims to figure out how ODA and DFI investment divide their own roles within the system of development finance. Next, in Chapter 3.2., the linkage between DFI investment and donor's private sector development will be examined. To empirically clarify the connection between the two, each individual DFI project has been thoroughly studied. Lastly, Chapter 4 concludes the study with the implications drawn from the analysis.

2. DATA

2.1. DFI Dataset

Data	Agency	Country	Time Span	Source
DFI Dataset	DEG	DEU	2018.5. - 2020.5.	https://deginvest-investments.de
	Proparco	FRA	2005 - 2020.5.	https://www.proparco.fr/en
	FMO	NLD	2000 - 2020.5.	https://www.fmo.nl/worldmap
	CDC	GBR	1996 - 2019.6.	https://www.cdcgroup.com
	Norfund	NOR	2000 - 2020.5.	https://www.norfund.no
	IFU	DNK	1989 - 2018	https://www.ifu.dk
	Finnfund	FIN	2016 - 2019	https://www.finnfund.fi/en/
	OeEB	AUT	2008 - 2020.5.	https://www.oe-eb.at
	BIO	BEL	2002 - 2020.5.	https://www.bio-invest.be/en
	SIFEM	CHE	1998 - 2019	https://www.sifem.ch

TABLE 3: DESCRIPTION ON DFI DATASET

The above table shows the general information on the DFI dataset. Since the descriptions on individual projects were only accessible via the internet, the author compiled all projects of the DFIs using web crawling. In terms of data availability, the

above 10 institutions' investment portfolios were available on the web. For other European DFIs, such as Swedfund(Sweden), Cofides(Spain), SIFEM(Italy) and SOFID(Portugal), the data was not accessible through the Internet.

FMO and OeEB were the institutions where all projects until today were accessible through the webpage. However, both institutions only gave information on the starting year for individual projects. The current status, active or exited, of the investments was not available. Proparco, Norfund, Finnfund, BIO, SIFEM only provides the portfolio in specific periods, and this varies by institutions. The data on these institutions are compiled in the late May of 2020. IFU, a Danish DFI, provides the portfolio information as of the last date of 2018. In relation to CDC, the institution only shows the information up until June 2019. Lastly, DEG's investment information's time availability was from 2018.5. to 2020.5. The data of each DFI does not appear to have a complete1 time-series. Therefore, the analysis done throughout the study will mostly done through comparing the shares of DFI investments based on many different categories.

To overcome the different sectoral classifications used by each DFI, the author harmonized the 10 European DFIs' portfolios by using the established classification of OECD CRS dataset.

2.2. Other Data

Data	Time Span	Source
ODA Data	2006 - 2018	OECD CRS Dataset
GDP Deflator	1996 - 2020	WDI Dataset
Exchange Rate	1996 - 2020	1) Fred Economic Data : EUR, DKK, INR, ZAR, TRY, NOR, LKR 2) National Central Banks : UZS, TJS, BDT, BOB, GEL, HNL, KES, KGS, NIO 3) www.xe.com : JOD, NGN, NPR

TABLE 4: DESCRIPTION ON OTHER DATA

The OECD CRS data has been utilized throughout the study to compare DFI investment with ODA. Also, all amount figures from all available investments are adjusted to 2018 million USD. In the process, the exchange rate data from 3 different sources has been used. Some countries' exchange rates were downloadable from the Fred Economic Data website. However, for the countries that the Fred website do not offer, the author compiled the exchange rates data either from each country's central bank website or from www.xe.com. For JOD, NGN and NPR, data from www.xe.com has been used since the central banks did not provide foreign exchange rates. The yearly average exchange rate is used for most of exchange rates. However, last month (December) exchange rate was also used for the currencies where the entire yearly exchange rate cannot be accessed.

3. ANALYSIS

Comparative analyses between the 10 European DFIs are conducted throughout Chapter 3. All analyses provided in this chapter will be done on the basis of the two-group classification of DFIs (Group 1 and Group 2) as it is once mentioned in the previous section (Section 1.1.3.). The guiding principle of the categorization is that DFIs are grouped based on their similarities in terms of their investment volumes and frequencies as provided in Table 2. The main reason for the grouping is to facilitate the comparative analyses between the DFIs. The classification makes it available to compare the portfolios in two ways: comparing within groups (intra-group comparison) and between the two groups (inter-group comparison).

As the portfolio data on DFIs are only available for the ten DFIs, the same classification is applied to group the available DFIs. Firstly, DEG (Germany), Proparco (France), FMO (Netherlands) and CDC (United Kingdom) are grouped into Group 1 DFIs. According to the figures provided in Table 2 (Section 1.1.3.), these institutions are the leaders in DFI investment. As the new commitment and total portfolio data suggest in Table 2, the four institutions' investments overwhelm the other institutions. Secondly, DFIs other than the four major institutions, which are Norfund (Norway), IFU (Denmark), Finnfund (Finland), OeEB (Austria), BIO (Belgium) and SIFEM (Switzerland), are clustered in Group 2. The classification of DFIs is displayed in Table 5 below.

Group 1	Group 2
	Norfund (Norway)
DEG (Germany)	IFU (Denmark)
CDC (the UK)	Finnfund (Finland)
Proparco (France)	OeEB (Austria)
FMO (the Netherlands)	BIO (Belgium)
	SIFEM (Switzerland)

TABLE 5: THE CLASSIFICATION OF DFIs

3.1. What are the Roles of the DFIs?

In this section, a comparative research between ODA and DFI investment is conducted at individual country level. The aim of the study is to clarify the unique and definitive characteristics of ODA and DFI investment. The main analytical method is to compare the sectoral distributions of ODA and DFI investment. Specifically, the top ten sectors of ODA and DFI investment are being compared in this section. As both instruments are designed under the umbrella of development finance, the sectoral comparison between the two would be meaningful in illuminating the unique roles of the two instruments of development finance.

Comparative analyses between the two instruments are feasible owing to the DFI dataset made by the author. All available DFI projects are retrieved from the web, and

each project has been restructured based on the sectoral classification used in the OECD CRS dataset. This makes ODA and DFI investment comparable in relation to their sectoral distributions. In Section 3.1.1., in-depth sectoral comparisons between ODA and DFI investment are laid out for each DFI within Group 1. Next, the same analysis for Group 2 DFIs are provided in Section 3.1.2. Lastly, findings and implications from the comparative analysis are drawn and summarized in Section 3.1.3. The figures provided throughout Section 3.1. are calculated based on the deflated commitment data for each project (2018 Million USD).

3.1.1. Group 1 DFIs

Before diving into the sectoral analysis, ODA loan share of the countries should be highlighted in advance. Most of European nations deliver ODA to developing countries in the form of untied and 100% grant. On the other hand, DFIs investments are mainly done through providing equity or debt to the beneficiaries. DFI operations by nature resemble concessional ODA loans. Therefore, it is important to see ODA loan shares of each countries ahead because there are rooms for an overlap between ODA and DFI investment especially for the ODA loan providers. According to Table 6, the countries can be divided into two groups when considering the ODA loan shares of each country. First of all, Germany and France can be clustered into a group since Germany and France display 28% and 43% respectively. Particularly, it is

evident that France is the most active loan provider in Europe showing the highest figure in ODA loan share. Secondly, the Netherlands and the United Kingdom show no or minuscule contribution in ODA loan provision as each country displays 0% and 4%. With this understanding, Group 1 DFIs are analyzed and compared in accordance with the characteristics revealed through ODA loan share data.

Group	DFI	Country	ODA Loan Share
Group 1 DFIs	DEG	Germany	28%
	Proparco	France	43%
	FMO	Netherlands	0%
	CDC	United Kingdom	4%

TABLE 6: ODA LOAN SHARE OF GROUP 1 DFIs (2006 – 2018)

Table 7 displays the sectoral comparison between German ODA and DEG's investment activities. In relation to Germany's ODA, the top-three-ranking activities are "Refugees in Donor Countries", "Post-Secondary Education" and "Government & Civil Society-general", and each sector shows 10%, 8% and 8%. All of these sectors are done by the means of ODA grant as the three sectors display less than 5% in ODA loan shares. Interestingly, "Energy generation, renewable sources" (7%), "Banking & Financial Services" (7%) and "Water supply & Sanitation" (6%) also account for a big proportion in German ODA. In particular, these sectors' loan shares are noticeably

high as each show 85%, 87% and 60%. This represents that the activities done via loan instrument plays a big part in German ODA.

German ODA's Top 10 Sectors				**DEG's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Refugees in Donor Countries	10%	0%		Banking & Financial Services	43%
Post-Secondary Education	8%	1%		Agnostic	11%
Government & Civil Society-general	8%	5%		Agriculture & Agro-industries	10%
Energy generation, renewable sources	7%	85%		Clean Energy	9%
Banking & Financial Services	7%	87%		Transport & Storage	7%
Water Supply & Sanitation	6%	60%		Start-up Promotion	5%
Other Multisector	6%	24%		Business & Other Services	3%
Action Relating to Debt	5%	3%		Water Supply & Sanitation	3%
Emergency Response	5%	0%		Industry & Manufacturing	2%
General Environment Protection	5%	12%		Health	2%

TABLE 7: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(GERMANY)

The sectoral shares of DEG's investments are provided on the right panel of Table 7. The top 4 ranking sectors are "Banking & Financial Services" (43%),

"Agnostic" (11%), "Agriculture & Agro-industries" (10%) and "Clean Energy" (9%), and these sectors make up 73% of DEG's investments. Notably, "Banking & Financial Services" is the main activity of DEG as the sector reaches around half of DEG's investments. Despite the difference between the DFIs, these 4 sectors commonly appear in the top-ranking list of the DFIs' sectoral distributions. Therefore, these 4 sectors will hereafter be called "the 4 major sectors of DFI investment." Other than the 4 major sectors, "Transport & Storage" and "Start-up Promotion" also accounts for 7% and 5% respectively.

The linkage between ODA and DFI investment is evident for Germany. The overlapping sectors between ODA and DEG investment are "Banking & Financial Services", "Clean Energy" and "Water Supply & Sanitation". These 3 sectors account for 20% in ODA and 55% in DEG's investment. Among the 3 overlapping sectors, "Banking & Financial Services" and "Clean Energy" are the sectors that are both significant to German ODA and DEG investment. And, the ODA operations for these sectors are provided mainly through loan instrument. In other words, Germany's ODA and DEG investment coincide in the sectors where ODA loan shares are high. Although there are overlapping sectors, the roles of the two instruments are basically divided.

Table 8 shows the sectoral distribution of French ODA and Proparco's investment. Since France is a fervent provider of ODA loan, French ODA distribution shows rather mixed characteristics as it has been observed in the German case. That is, the sectors using grant instrument and loan instruments are evenly distributed among

the top 10 sectors. Firstly, “Action Relating to Debt” (11%) and “Post-Secondary Education” (11%) account for over a fifth of French ODA, and the aids in these sectors are mainly provided through ODA grant as the low loan shares represent. However, the following 4 sectors, which are “Transport & Storage” (8%), “Other Multisector” (8%), “Water Supply & Sanitation” (7%) and “General Environment Protection” (6%), more frequently utilize loan instruments.

French ODA’s Top 10 Sectors				**Proparco’s Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Action Relating to Debt	11%	10%		Banking & Financial Services	45%
Post-Secondary Education	11%	1%		Clean Energy	18%
Transport & Storage	8%	96%		Agriculture & Agro-industries	8%
Other Multisector	8%	58%		Transport & Storage	5%
Water Supply & Sanitation	7%	88%		Agnostic	5%
General Environment Protection	6%	81%		Energy	4%
Refugees in Donor Countries	5%	0%		Health	3%
Administrative Costs of Donors	5%	0%		Water Supply & Sanitation	3%
General Budget Support	4%	49%		Industry & Manufacturing	2%
Agriculture	4%	36%		Start-up Promotion	2%

TABLE 8: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(FRANCE)

With regard to French DFI investment, the 4 major sectors account for 76% as "Banking & Financial Services", "Clean Energy", "Agriculture & Agro-industries" and "Agnostic" show 45%, 18%, 8% and 5% respectively. Similar to the German case, financing to financial sector is the biggest part of Proparco's investment. However, compared to Germany, France invests more on renewable energy projects and less on Agnostic sector (fund investments). In general, Proparco also centers on providing financing to the 4 major sectors.

It is hard to discover a meaningful connection between ODA and DFI investment for France. Although the "Transport & Storage" and "Water Supply & Sanitation" sectors appear to overlap, there is a big difference between the importance of the 2 sectors in ODA and DFI investments. 15% of French ODA is committed to the "Transport & Storage" (8%) and "Water Supply & Sanitation" (7%) sectors. On the contrary, the two sectors only account for 8% in total when it comes to French DFI investment. In sum, it can be seen that in France, ODA and DFI financing play different roles despite the high loan share (43%) that France possesses.

Table 9 shows the Netherlands' sectoral distribution of ODA and DFI investment. ODA flows in "Other Multisector" (11%), "Refugees in Donor Countries" (10%) and "Government & Civil Society-general" (9%) are the top 3 ranking sectors, which account for 30% of the country's total ODA. Also, the country is active on supporting "Administrative Costs of Donors" (6%), "Emergency Response" (6%), "Water supply & Sanitation" (5%) and "Action Relating to Debt" (5%).

Dutch ODA's Top 10 Sectors				FMO's Top 10 Sectors	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Other Multisector	11%	0%		Banking & Financial Services	42%
Refugees in Donor Countries	10%	0%		Clean Energy	22%
Government & Civil Society-general	9%	0%		Agriculture & Agro-industries	13%
Unallocated / Unspecified	6%	0%		Agnostic	6%
Administrative Costs of Donors	6%	0%		Energy	3%
Emergency Response	6%	0%		Transport & Storage	3%
Water Supply & Sanitation	5%	0%		Start-up Promotion	2%
Action Relating to Debt	5%	0%		Communications	2%
Business & Other Services	5%	0%		Industry & Manufacturing	2%
Population Policies/Programs & Reproductive Health	4%	0%		Infrastructure	1%

TABLE 9: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(NETHERLANDS)

When it comes to FMO's investments, the 4 major sectors of DFI investment are also placed on the top-ranking board of the sectoral distribution. In particular, "Banking & Financial Services" (42%), "Clean Energy" (22%), "Agriculture & Agro-industries" (13%) and "Agnostic" (6%) sums up to 83% of total FMO investment activities. FMO invest more on the 4 major sectors than other countries within Group 1

as the 4 sector total shares are 73%, 76%, 71% for Germany, France, the United Kingdom respectively. Also, FMO places particular emphases on renewable energy (22%) and agribusiness (13%) projects compared to DEG and Proparco. With regard to the relationship between ODA and DFI investment for the Netherlands, there is no overlapping sector between Dutch ODA and FMO's operations. That is, the two instruments play completely distinct roles. As a grant 100% nation, operations that cannot be done through ODA are done through DFI investment.

Table 10 displays the sectoral distribution of the UK's ODA and its DFI investment. The dominant feature of the UK's ODA is that the top 3 sectors, namely "Government & Civil Society-general" (9%), "Emergency Response" (9%) and "Other Multisector" (7%), account for nearly 30% of the country's ODA. Another interesting feature is that the UK strongly supports the health sector of developing countries through its ODA provision. "Health, general" (5%), "Population Policies/Programmes & Reproductive Health" (5%) and "Basic Health" (5%) fall under the health category, and these 3 sectors add up to 15% of the UK's ODA. Furthermore, "Banking & Financial Services" takes up 5%, and half of funding to financial sectors are provided using ODA loans.

CDC's way of investment is very different from the other institutions within Group 1. The most distinctive feature observed from the data is that the share of "Agnostic" is overwhelmingly higher than other Group 1 DFIs, accounting for 50% of CDC investments. Yet, Germany and France only show 11% and 5% in the "Agnostic" sector. This implies that half of CDC's resources are invested into the developing

world via financial intermediaries. Specifically, the majority of CDC funding are invested into investment firms, and these companies strategically provide the money to private companies in the developing countries. Nevertheless, CDC's unique way of investment does not change the top priorities of DFI investment as the sum of 4 major sectors is 71%.

British ODA's Top 10 Sectors				**CDC's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Government & Civil Society-general	9%	0%		Agnostic	50%
Emergency Response	9%	0%		Banking & Financial Services	11%
Other Multisector	7%	1%		Infrastructure	9%
Health, General	5%	1%		Start-up Promotion	6%
Population Policies/Programs & Reproductive Health	5%	0%		Clean Energy	6%
Administrative Costs of Donors	5%	0%		Agriculture & Agro-industries	4%
Basic Health	5%	2%		Construction	4%
Conflict, Peace & Security	5%	0%		Health	2%
General Environment Protection	5%	0%		Energy	2%
Banking & Financial Services	5%	51%		Transport & Storage	2%

TABLE 10: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(UNITED KINGDOM)

"Banking & Financial Services" overlap between the UK's ODA and CDC investment as it accounts for 5% in ODA and 11% in DFI investment. The "Health" sector seems to appear in both panels. Health sector is significant to ODA, whereas health sector only accounts for 2% of CDC's investments. Therefore, it would be hard to say that health sector overlaps in both ODA and DFI investment. As a grant provider, UK also displays similar characteristics that have been observed in the Dutch case where the two financial instruments have different roles.

3.1.2. Group 2 DFIs

Group	DFI	Country	ODA Loan Share
Group 2 DFIs	Norfund	Norway	3%
	IFU	Denmark	3%
	Finnfund	Finland	5%
	OeEB	Austria	2%
	BIO	Belgium	2%
	SIFEM	Switzerland	2%

TABLE 11: ODA LOAN SHARE OF GROUP 2 DFIs (2006 – 2018)

This section covers the sectoral comparisons between ODA and DFI investment of Group 2 DFIs. The same analytical methodology is used to unfold the separate roles of ODA and DFI investment. Before getting into the main research, one universal feature of Group 2 countries needs to be emphasized. That is, over 95% of ODA are provided via grant instrument as shown in Table 11. This feature, as we have already seen in the case of the Netherlands and the UK, suggests a clear division of roles between ODA and investment of DFI. This point will be empirically examined throughout section 3.1.2.

Table 12 exhibits the sectoral distribution of Norwegian aid and Norfund's investment. Norway's ODA mainly focuses on "General Environmental Protection" (12%), "Government & Civil Society-general" (12%), "Emergency Response" (10%), and these sectors comprise over 30% of Norwegian ODA. Also, "Refugees in Donor Countries" (8%) and "Administrative Costs of Donors" (6%) are following the top three sectors.

When it comes to Norfund's investments, the rankings of the 4 major sectors are placed in the highest place. The total of 4 major sectors reaches up to 96% of Norwegian development financing investments. In specific, Norfund's involvement in the renewable energy sector records 52%. This figure suggests that Norway is very much keen on supporting the clean energy projects in the developing countries. However, Norfund's Investments in other sectors are very miniscule. As previously predicted, hardly any overlapping sector is observed between the two channels of

development finance. In other words, Norway uses ODA and DFI investment in Norway are used with different objectives.

Norwegian ODA's Top 10 Sectors				**Norfund's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
General Environment Protection	12%	0%		Clean Energy	52%
Government & Civil Society-general	12%	0%		Banking & Financial Services	27%
Emergency Response	10%	0%		Agnostic	11%
Refugees in Donor Countries	8%	0%		Agriculture & Agro-industries	6%
Administrative Costs of Donors	6%	1%		Start-up Promotion	2%
Conflict, Peace & Security	6%	0%		Tourism	0.5%
Other Multisector	6%	0%		Energy	0.4%
Basic Education	6%	0%		Health	0.3%
Basic Health	4%	0%		Transport & Storage	0.3%
Business & Other Services	3%	18%		Construction	0.2%

TABLE 12: COMPARISON BETWEEN ODA AND DFI INVESTMENT (NORWAY)

Table 13 shows Denmark's sectoral distribution of ODA and DFI investment. First of all, Danish ODA seems to focus on the sectors that are highlighted in the cases of donors that provide ODA using grant instrument. "Government & Civil Society-

general" (17%), "Emergency Response" (11%) and "Refugee in Donor Countries" (8%) are the sectors of focus accounting for 36% of entire Danish ODA. "Administrative Costs of Donors" (6%) and "Agriculture" (5%) are also on the-top ranking list.

Danish ODA's Top 10 Sectors				**IFU's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Government & Civil Society-general	17%	0%		Agriculture & Agro-industries	27%
Emergency Response	11%	0%		Agnostic	15%
Refugees in Donor Countries	8%	0%		Clean Energy	15%
Administrative Costs of Donors	6%	0%		Industry & Manufacturing	13%
Unallocated / Unspecified	6%	32%		Banking & Financial Services	9%
Agriculture	5%	3%		Business & Other Services	8%
General Environment Protection	5%	0%		Transport & Storage	5%
Water Supply & Sanitation	4%	1%		Energy	2%
Business & Other Services	4%	1%		Infrastructure	2%
Conflict, Peace & Security	4%	0%		Construction	2%

TABLE 13: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(DENMARK)

Denmark's DFI investments are a bit different from the other institutions that have been touched upon so far. Basically, the 4 main sectors account for the majority (66%), but the numbers are low compared to other DFIs. In specific, the focus on "Banking & Financial Services" (9%) among the 4 major sectors is clearly low, and the investments in "Agriculture" (27%) is overwhelmingly high. When comparing the two tables provided in Table 13, the "Agriculture" sector is common. However, unlike in IFU investment, the agriculture sector in ODA occupies a less important position. Thus, in the case of Denmark, it can be seen that ODA and DFI investments have different functions and are complementary to each other.

Table 14 displays Finland's sectoral distribution of ODA and DFI investment. Finnish ODA largely focuses on "Government & Civil Society-general" (10%), "Emergency Response" (10%) and "Administrative Costs of Donors" (8%), which nearly make up 30% of ODA. "Other Multisector" (6%) and "Refugees in Donor Countries" (5%) are also important in Finland's ODA, and these two sectors commonly appear in other countries that primarily provides ODA grants. In regard to Finland's DFI investment, the 4 major sectors of DFI investment are in the top-ranking list. However, the sum of the 4 major sectors accounts for 70% which is lower than the other counterparts' figures. This is becuase Finnfund pursues a balanced investment strategy. This point can be made by looking at the sectors' shares including "Communications" (7%), "Energy" (7%), "Health" (5%), and "Start-up Promotion" (5%).

Connections between Finland's ODA and Finnfund's investment can be hardly detected through the provided data. Only "Forestry" (5%) in ODA and "Agriculture & Agro-industries" (21%) in DFI investment seem to be a meaningful match between the two instruments. However, as a country that provides almost all ODA with grant instrument, the same conclusion can be drawn that there is a distinction in roles between Finnish ODA and Finnfund's investments.

Finnish ODA's Top 10 Sectors				**Finnfund's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Government & Civil Society-general	10%	0%		Banking & Financial Services	26%
Emergency Response	10%	0%		Agriculture & Agro-industries	21%
Administrative Costs of Donors	8%	0%		Clean Energy	20%
Unallocated / Unspecified	7%	11%		Communications	7%
Other Multisector	6%	0%		Energy	7%
Refugees in Donor Countries	5%	0%		Health	5%
Water Supply & Sanitation	5%	0%		Start-up Promotion	5%
Conflict, Peace & Security	5%	0%		Agnostic	3%
Forestry	5%	16%		Transport & Storage	2%
Education, Level Unspecified	3%	0%		Industry & Manufacturing	2%

TABLE 14: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(FINLAND)

Table 15 exhibits the structure of Austrian Aid and DFI investment. With regard to Austrian ODA, the sectoral distribution seems to be biased toward the high-ranking sectors. The top 3 components, which are "Action Relating to Debt" (27%), "Refugees in Donor Countries" (17%) and "Post-Secondary Education" (15%), makes up over half of Austrian ODA. Other sectors except the first three account for 3% to 4%.

Austrian ODA's Top 10 Sectors				**OeEB's Top 10 Sectors**	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Action Relating to Debt	27%	0%		Banking & Financial Services	49%
Refugees in Donor Countries	17%	0%		Clean Energy	21%
Post-Secondary Education	15%	0%		Agnostic	13%
Administrative Costs of Donors	4%	0%		Agriculture & Agro-industries	6%
Health, General	4%	0%		Energy	3%
Government & Civil Society-general	4%	0%		Infrastructure	3%
Water Supply & Sanitation	3%	0%		Industry & Manufacturing	3%
Emergency Response	3%	0%		Communications	1%
Other Multisector	3%	2%		Water Supply & Sanitation	1%
Secondary Education	2%	0%		Transport & Storage	1%

TABLE 15: COMPARISON BETWEEN ODA AND DFI INVESTMENT (AUSTRIA)

Likewise, OeEB's investment activities also largely centers on the 4 major sectors of DFI investment. The total of 4 major sectors consists 89% of the OeEB's portfolio. For the overlaps, "Water Supply & Sanitation" seems to intersect between ODA and DFI investment. However, financing to the water sector in OeEB's investment only accounts for 1.1% out of total portfolio. Therefore, no significant overlapping sector is found through the data. In other words, Aid and investment of DFI are doing their unique operations. In sum, Austrian aid and DFI financing do not seem to work hand-in-hand, having their unique roles.

Table 16 shows Belgium's distribution of ODA and DFI Investment. Belgium seems to use a similar strategy to that of countries that provides the majority of ODA as a grant. "Refugee in Donor Countries" (11%), "Action Relating to Debt" (9%) and "Emergency Response" (8%) are the main contributors that make up the Belgian aid.

Regarding the BIO's activities, the sum of 4 major sectors, namely "Banking & Financial Services" (45%), "Clean Energy" (23%), "Agnostic" (13%) and "Agriculture & Agro-industries" (7%), composed 88% of the BIO's investment portfolio. For the overlapping sectors, "Agriculture" (7%) in ODA and "Agriculture & Agro-industries" (6.9%) seem to match between the two. However, the match does not seem to be significant to say that ODA and DFI investment go hand-in-hand. In total, the data in Table 16 generally suggests that ODA and DFI investment are walking a different path with their own purposes.

Belgian ODA's Top 10 Sectors				BIO's Top 10 Sectors	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Refugees in Donor Countries	11%	0%		Banking & Financial Services	45%
Action Relating to Debt	9%	0%		Clean Energy	23%
Emergency Response	8%	0%		Agnostic	13%
Other Multisector	7%	1%		Agriculture & Agro-industries	7%
Government & Civil Society-general	7%	0%		Energy	7%
Agriculture	7%	0%		Start-up Promotion	3%
Administrative Costs of Donors	6%	0%		Education	1%
Post-Secondary Education	5%	0%		Business & Other Services	1%
Unallocated / Unspecified	5%	0%		Health	0.4%
Basic Health	4%	2%		Communications	0.1%

TABLE 16: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(BELGIUM)

As shown through the left panel of Table 17, Switzerland adopts a similar strategy to Austria's in terms of its aid provision. The first 3 sectors make up 39% of Swiss ODA as "Refugees in Donor Countries", "Emergency Response" and "Government & Civil Society-general" respectively show 17%, 12% and 10%. Also, "Other Multisector" is highlighted as it accounts for 9% of Switzerland's ODA.

Swiss ODA's Top 10 Sectors				SIFEM's Top 10 Sectors	
Sector	**Share**	**Loan Share**		**Sector**	**Share**
Refugees in Donor Countries	17%	0%		Agnostic	54%
Emergency Response	12%	0%		Banking & Financial Services	23%
Government & Civil Society-general	10%	0%		Clean Energy	8%
Other Multisector	9%	2%		Start-up Promotion	6%
Administrative Costs of Donors	6%	0%		Infrastructure	3%
Water Supply & Sanitation	5%	0%		Education	2%
Unallocated / Unspecified	5%	0%		Health	2%
Agriculture	4%	0%		Agriculture & Agro-industries	2%
Conflict, Peace & Security	4%	0%			
Banking & Financial Services	3%	37%			

TABLE 17: COMPARISON BETWEEN ODA AND DFI INVESTMENT

(SWITZERLAND)

Regarding the Switzerland's DFI investment, the focus of investment is clearly on the 4 major sectors. The sum of the 4 sectors takes up 87% of SIFEM's portfolio. Interestingly, "Agnostic" sector accounts for 54% of SIFEM's investment. This demonstrates that SIFEM is adopting very unique investment strategies similar to CDC. Put differently, a substantial part of investments is made in the form of fund investments through investment firms. For the intersecting sectors, only "Banking &

Financial Services" sector seems to be meaningful to both ODA and DFI investment. In sum, Switzerland is a country where ODA and DFI investment play different roles like any other countries within Group 2.

3.1.3. Findings

An important finding found in the previous analysis is that the availability of ODA loans affects the relationship between ODA and DFI investments. In the case of Germany, a country that actively provides ODA loans, ODA and DFI investments are closely linked. In particular, it was found that both Germany's ODA and DEG's funding are active in the sectors of "Banking & Financial Services" and "Clean Energy". On the other hand, France, which possesses higher ODA loan share than Germany, has no significant link between ODA and DFI investment. In summary, it can be seen that in countries other than Germany, ODA and DFI investment are used complementarily to each other for different purposes.

This complementary nature is best illustrated by the two tables provided in Section 3.1.3. First, Table 18 summaries the distribution of the 6 major sectors in the ODA, which are commonly important to all countries featured in this study. The DFI column in Table 18 calculated by summing all the countries' ODA commitments, these 6 sectors account for 41% of total ODA.

It can be said that there are differences between countries with a minimum of 32% (Finland) and a maximum of 68% (Austria), but the ODA of European donors has a clear focus on these six sectors.

6 Major Sectors of ODA	**DFI**	**DEU**	**FRA**	**NLD**	**GBR**	**NOR**	**DNK**	**FIN**	**BEL**	**AUT**	**CHE**
Refugees in Donor Countries	8%	10%	5%	10%	2%	8%	8%	5%	11%	17%	17%
Government & Civil Society-general	8%	8%	2%	9%	9%	12%	17%	10%	7%	4%	10%
Other Multisector	7%	6%	8%	11%	7%	6%	3%	6%	7%	3%	9%
Action Relating to Debt	6%	5%	11%	5%	5%	1%	2%	0.1%	9%	27%	2%
Post-Secondary Education	6%	8%	11%	3%	1%	1%	1%	1%	5%	15%	1%
Emergency Response	6%	5%	0.5%	6%	9%	10%	11%	10%	8%	3%	12%
Total	41%	42%	38%	44%	34%	38%	41%	32%	47%	68%	50%

TABLE 18: THE SIX MAJOR SECTORS OF ODA

4 Major Sectors of DFI Investment	DFI	DEU	FRA	NLD	GBR	NOR	DNK	FIN	BEL	AUT	CHE
Banking & Financial Services	32%	43%	45%	42%	11%	27%	9%	26%	45%	49%	23%
Agnostic	20%	11%	5%	6%	50%	11%	15%	3%	13%	13%	54%
Clean Energy	18%	9%	18%	22%	6%	52%	15%	20%	23%	21%	8%
Agriculture & Agro-industries	9%	10%	8%	13%	4%	6%	27%	21%	7%	6%	2%
Total	79%	73%	76%	83%	71%	96%	66%	70%	88%	89%	87%

TABLE 19: THE FOUR MAJOR SECTORS OF DFI INVESTMENT

In the case of DFI investments, the focus is on 4 major sectors, as it was already mentioned previously. Various distributions of the sum of the 4 sectors exist, ranging from at least 66% (Denmark) to 96% (Norway), but the DFI column suggests that on average, 80% of DFI investment is concentrated in these 4 sectors. Looking at the share of each country's 4 sectors in detail, there are differences among countries in each sector, but there is no objection that all DFIs are focused on the 4 major sectors.

Looking closely at the 4 major sectors that make up the mainstream of DFI activity, all of these are closely related to the business activities in developing countries. First, funding for the “Banking & Financial Services” sector is dominated by the investments to commercial banks, Microfinance institutions and NBFIs. Among them, loans or equity investments to commercial banks account for a large proportion. The primary task of commercial banks is to provide funds to companies. Thus, these activities are effective in developing private sector in developing countries.

The second is the investment in the “Agnostic” sector, which is mainly represented by the activities of helping private companies in developing countries via funds raised by investment companies. Private equity funds, funded by the DFIs, strategically invest in companies in developing countries with high growth potential. These activities contribute greatly to the development of the private sector in developing countries. Therefore, it is clear that fund investment provides the private sector growth momentum in developing countries and contributes greatly to job creation and income growth in developing countries.

Thirdly, investment in the “Clean Energy” sector is also connected to the development of entrepreneurship in developing nations. Many firms with high growth potentials producing renewable energy infrastructures have sprung up in many developing countries. Therefore, investing in clean energy projects is a great opportunity not only to increase the supply of energy, but also to promote the corporate activities of clean energy companies in developing countries.

Lastly, investment in the “Agriculture & Agro-industries” sector also has a significant impact on the development of private sector in developing countries. Considering the fact that the agricultural sector still takes up a significant part of the developing economies, the DFI investment to agribusinesses greatly contributes to the development of the private sector in developing countries.

Taken together, the results of the analysis so far show that ODA and DFI investments are invested in different sectors. European donors provide ODA to developing countries with the objective of helping refugees, promoting democracy abroad and other objectives with humanitarian purposes. On the other hand, DFI investments largely center on promoting businesses in developing countries. In countries that offer ODA loans, there are some overlapping elements, but in general the two means of development finance play different roles.

3.2. Donor's Private Sector Involvement in DFI Investment

In the previous section, the empirical evidences led us to the finding that ODA and DFI investments play fundamentally different roles, and the primary focus of DFI investments is on promoting business activities in developing countries. Yet, if there were cases where DFI investments were used as a steppingstone for donor firms' entry into developing markets, what would this be? This point has already been made in the research by Jeong (2015). Through an in-depth interview with the officials from the Exim Bank Tanzania, Jeong (2015) stated that there is a possibility that loans offered by DFIs to developing countries' banks could accompany restrictive clauses specifying loans to donor country's companies. Therefore, Section 3.2. is dedicated to find out how deeply the donor country's private sector is involved in DFI investments.

To confirm the involvement of donor's private sector in DFI investments, the author conducted an individual project-level investigation. Donor's private sector engagement in DFI projects can takes many forms. Moreover, various tangled interests behind DFI investments make it difficult to uncover the linkage between DFI investment and donor's private sector. In this study, several criteria were made by generalizing the various types of donor's involvement in DFI projects.

First of all, if the head office location of the direct beneficiary matches the donor country, the project is considered that the private sector of donor country is involved. For example, DEG's equity investment to "BIO-LUTIONS", which is a

German start-up established in Hamburg in 2014, is considered that German private sector's interests are promoted through the investment.

Secondly, in the case of supporting foreign subsidiaries of donor's parent companies, the project is regarded as connected to the donor's private sector. Proparco's financing to "Societe Generale Burkina Faso" is an instance for this case. Since the parent company, namely "Societe Generale", is headquartered in France, it was considered that the French interests were included in the project.

Thirdly, financing to Special Purpose Vehicles (SPV), any kind of donor firms' involvement in the project is regarded as linked to the private sector of the donor country. For instance, a SPV named "Azito Energie" includes many stakeholders from various countries. In particular, the AKFED (Switzerland), EDF (France), CDC (UK) and ABB (Switzerland) are the major shareholders of the company. Proparco financed the company in 2012, and this project was considered linked to the French private sector.

Fourthly, in the instance of fund investments, if the head office location of the fund manager matches the donor country, the project is deemed that the private sector of donor country is involved. For example, CDC's investment to "Apis Growth Fund I" regarded linked to the UK's private sector as the fund is managed by "Apis Partners LLP", a London-based private equity firm. Occasionally, the DFI itself or a donor company is an anchor investor in a particular fund and has a significant stake in the fund manager. In such cases, funding provided to such funds was considered that the donor's interests were included in the project.

Fifthly, regarding the financing projects to banks or finance companies, when a tie that promotes donor firms' interests is included in the project, the project is viewed that the private sector of donor is included. For example, a loan provided by DEG to "Firstrand Bank Limited", a South African Bank, has a condition that the funding will be explicitly used to finance German Businesses in South Africa. Therefore, the project is considered that the German interests are connected to the project. Last but not least, if donor's interests are explicitly specified in the project description, the project is also considered to reflect the interests of the donor country.

Using the above criteria, the following analyses will empirically assess the connectivity between DFI projects and donor's private sector involvement. Project descriptions, annual reports, newspaper articles from variable websites, and other available information on the Internet were used in the following analysis. Although all available information has been used, it should be noted that there are limitations in accurately identifying the interests of the various countries contained within the individual projects.

3.2.1. Group 1 and 2 DFIs

Table 20 displays Group 1 institutions' percentage of financing to donor's private sector. Firstly, the shares of the first three countries show a moderate level of association as the figures of Germany, France and the Netherlands are 15%, 20% and

12% respectively. These three countries support their companies by mainly using "Debt" instruments. However, in the case of the UK, where the proportion of fund investment is high, the share of projects that support the donor's private sector is 41%, which is overwhelmingly higher than other countries in Group 1. In terms of financial instrument, 87% of CDC's funding that supports British private sector adopts the "Intermediated" instrument, which is fund investment.

DFI Group	Country	Share of Financing to Donor's Private Sector (SDPS)	Instruments			
			Inter -mediated	Debt	Equity	Grant & TA
Group 1	**DEU**	15%	5%	95%	1%	
	FRA	20%	12%	82%	6%	0.01%
	NLD	12%	23%	66%	10%	1%
	GBR	41%	87%	11%	2%	

TABLE 20: SHARE OF FINANCING TO DONOR'S PRIVATE SECTOR

(GROUP 1 DFIs)

Table 21 displays Group 2 DFIs' share of financing to donor's private sector. Among Group 2 DFIs, Norway and Denmark have similar characteristics. In these two countries, around 70% of DFI investments reflect the interests of donor's private sector.

Also, these two countries similarly use equity investment as the main tool. In Finland, 14% of the total investment is made up of investments that reflect the interests of the Finnish private sector. This figure is similar to that of Group 1 DFIs. Belgium and Austria have very low numbers in the share of financing to donor's private sector. However, the low figures attribute to the limited access to the detailed information on BIO and OeEB's investments. Finally, DFI investments in Switzerland are mainly made in the form of fund investments, and this feature explains the low level of support for the Swiss private sector.

DFI Group	Country	Share of Financing to Donor's Private Sector (SDPS)	Instruments			
			Inter -mediated	Debt	Equity	Grant & TA
Group 2	**NOR**	67%	25%	1%	75%	
	DNK	71%	20%	25%	55%	
	FIN	14%		96%	4%	
	BEL	3%	16%	77%	7%	0.4%
	AUT	2%	18%	81%	0.4%	
	CHE	2%	100%			

TABLE 21: SHARE OF FINANCING TO DONOR'S PRIVATE SECTOR

(GROUP 2 DFIs)

3.2.2. Findings

DFI Group	Country	Share of Financing to Donor's Private Sector (SDPS)	Direct Investment[8] Share of FDPS (DISDPS)	[9]Share of Directly Supported Donor's Private Sector (SDSDPS)
Group 1	**DEU**	15%	95%	14%
	FRA	20%	88%	17%
	GBR	41%	13%	5%
	NLD	12%	77%	9%
Group 2	**NOR**	67%	75%	50%
	DNK	71%	80%	57%
	FIN	14%	100%	14%
	BEL	3%	84%	2%
	AUT	2%	82%	2%
	CHE	2%	0%	0%

TABLE 22: SHARE OF DIRECT SUPPORT TO DONOR'S PRIVATE SECTOR

[8] Direct investment = Debt + Equity + Grant & Technical Assistance
[9] SDSDPS = (SDPS) * (DISDPS)

The analysis so far has identified the extent of investment that reflects the donor's interests out of total portfolio. Even with the limitations of data accessibility to individual projects of DFI activities, the UK in Group 1 and Norway, Denmark in Group 2 were the countries that are actively linking DFI investments with their private sector interests.

However, in countries with high fund investments, such as the UK, no matter how high the percentage of SDPS is, the figures may be low when the figures are calculated differently. In the case of fund investment, it may not be related to the entry of donor's firms into developing markets since DFI financing is bypassed to developing countries through investment firms. Therefore, in Table 22, "Share of Directly Supported Donor's Private Sector (SDSDPS)" is calculated by multiplying "Share of Financing to Donor's Private Sector (SDPS)" with "Direct Investment Share of Donor's Private Sector (DISDPS)" to see the percentage of DFI projects that only reflects the donor's interests for the new market entry. Here, direct investment means all types of investment using financial tools except fund investment, namely equity investments, debt provisions, grants and technical assistances.

There are a few points to note in Table 22. First, in Group 1, the UK's SDPS shows that 41% of CDC's investment reflect the interests of the UK private sector. However, only 13% of the 41% are executed using direct investment instruments. As a result, only 5% of total funding make up the investments that contain the interests of the British private sector on its domestic companies' overseas expansion. Next, among Group 2 countries, Norway and Denmark are impressive. Norway and Denmark have a

high SDPS figure of close to 70%. When looking at the DISDPS of these two countries, 75% and 80% respectively, direct investment instruments are mainly used to support the private sector's interests of both countries. Therefore, looking at SDSDPS of Norway and Denmark, it can be seen that more than 50% of the investment is used for overseas entry of donor's companies. Noticeably, Denmark shows 57%, and this demonstrates the eager of Denmark in connecting DFI investments with its domestic firms' overseas expansion.

4. CONCLUSION

The discussion so far looked at what DFIs are doing and how they are related to the private sector development of donor country. First, through comparative analysis between ODA and DFI investments, it turned out that the two financial instruments basically play different roles and complement each other. Specifically, European donors are helping the refugee issue, political development of recipient countries, education and others through ODA, and through DFI investments, they focus on financing to financial intermediaries, SMEs, renewable energy projects and agribusinesses. In Germany, it appeared that ODA and DFI investments have some common grounds, but basically the sector distribution of Germany clearly shows the role division between the two instruments.

As for the relationship between DFI investment and donor's private sector development, with the given data, it is difficult to figure out all the detailed interests involved in the decision making of DFI investments. However, with all available data, analysis in Section 3.2. found that the DFIs not only keen on the development of the recipient countries, but also on the private sector development of the donors. This point has been observed in the cases of the UK, Norway and Denmark. Moreover, Norway and Denmark are the countries that openly and aggressively support the development of their own firms, and it is backed by the high equity shares of projects that are linked to the donor's private sector development.

It is evident from the analysis that European countries support their domestic firms doing business in developing countries through DFI investment activities. However, even in this case, there is still no change in the fact that DFI investments promote the private sector development in developing countries by facilitating corporate activities. In light of this, DFI investments can be view as a win-win development strategy for both donor and recipient countries. Moreover, if used wisely, it will play a very good role in promoting partnerships between donor and recipient countries.

LIST OF REFERENCES

References in English

Attridge et al. (2019). Impact of Development Finance Institutions on Sustainable Development: An essay series. EDFI.

Bracking, S. (2012). How do Investors Value Environmental Harm/Care? Private Equity Funds, Development Finance Institutions and the Partial Financialization of Nature-based Industries. *Development And Change*, *43*(1), 271-293. doi: 10.1111/j.1467-7660.2011.01756.x

EDFI. (2011). 2011 Annual Report. EDFI.

EDFI. (2016). Flagship Report. EDFI.

Jouanjean, M. & Te Velde, D. (2013). The Role of Development Finance Institutions in Promoting Jobs and Structural Transformation: A quantitative assessment. Overseas Development Institute.

Kingombe et al. (2011). Comparing Development Finance Institutions Literature Review. Overseas Development Institute.

Levine, R. (2005). Finance and Growth: Theory and Evidence. Handbook of Economic Growth. Volume 1. Chapter 12. pp. 865-934. Elsevier.

Massa et al. (2016). The Macroeconomic Effects of Development Finance Institutions in sub-Saharan Africa. Overseas Development Institute.

Massa, I. (2011). Impact of Multilateral Development Finance Institutions on Economic Growth. Overseas Development Institute.

Proparco. (2018). Private Sector & Development. Proparco's Quarterly Magazine.
Cole, R., & Sokolyk, T. (2018). Debt financing, survival, and growth of start-up firms. *Journal of Corporate Finance, 50*, 609-625.

Rajan, R. & Zingales, L. (1998). Financial Dependence and Growth. American Economic Review. V.88: pp. 559-586.

Rørvik, M. (2011). Development Finance: Development through a "Big Push" and the role of the development finance institutions in Europe. University of Oslo. 2011.

Savoy et al. (2016). Development Finance Institutions Come of Age: Policy engagement, impact, and new directions. CSIS.

Te Velde, D. (2011). The Role of Development Finance Institutions in Tackling Global Challenges. Overseas Development Institute.

Vaes, S., & Huyse, H. (2015). Private Sector in Development Cooperation: Mapping international debates, donor policies, and Flemish development cooperation. HIVA.

References in Korean

정혁. (2013). 개발금융 도입을 통한 한국의 개발협력 체제 발전 방향에 관한 고찰. 한국수출입은행 연구용역 최종보고서.

정혁. (2015) 중장기 양허성차관 선진화 방안. 한국수출입은행 연구용역 최종보고서.

Websites

CDC Group. (2019). *Development Finance Institution | CDC Group*. [online] Available at: https://www.cdcgroup.com/.

Deginvest.de. (2019). *DEG - Deutsche Investitions- und Entwicklungsgesellschaft*. [online] Available at: https://www.deginvest.de/Internationale-Finanzierung/DEG/.

Development through investment | BIO. (2020). Retrieved 28 July 2020, from https://www.bio-invest.be

EDFI | European Development Finance Institutions. (2019). Retrieved 27 November 2019, from https://edfi.eu/

Etusivu - Finnfund. (2020). Retrieved 28 July 2020, from https://www.finnfund.fi

Fattigdomsminskning genom hållbart företagande - Swedfund. (2020). Retrieved 28 July 2020, from https://www.swedfund.se

Financiación para la Internacionalización y el Desarrollo | COFIDES. (2020). Retrieved 28 July 2020, from https://www.cofides.es

Fmo.nl. (2019). *Entrepreneurial Development Bank - FMO*. [online] Available at: https://www.fmo.nl/.

IFU | Investeringsfonden for udviklingslande. (2020). Retrieved 28 July 2020, from https://www.ifu.dk

Norfund - Creating Jobs – Improving Lives. (2020). Retrieved 28 July 2020, from https://www.norfund.no

OeEB Home. (2020). Retrieved 28 July 2020, from https://www.oe-eb.at/en/

Proparco.fr. (2019). *Accueil | Proparco - Groupe Agence Française de Développement*. [online] Available at: https://www.proparco.fr/fr.

SACE SIMEST - servizi assicurativi e finanziari per export e internazionalizzazione. (2020). Retrieved 28 July 2020, from https://www.sacesimest.it

SIFEM - Swiss Investment Fund for Emerging Markets. (2020). Retrieved 28 July 2020, from https://www.sifem.ch

Annual Reports

BIO: 2018

CDC: 1999 – 2001, 2003 – 2018

COFIDES: 2003 – 2007, 2009, 2013, 2014

DEG: 2015 – 2019

Finnfund: 2001 – 2019

FMO: 2014 – 2018

IFU: 1999 – 2019

Norfund: 2008 – 2019

OeEB: 2014 – 2019

Proparco: 2005, 2006, 2008 – 2017

SACE: 2007 – 2018

SIFEM: 2011 – 2019

Swedfund: 2009, 2010, 2013, 2014, 2016 – 2019

APPENDIX

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	2%		0.27	42.79	26.14	
112	Basic Education	1%		1.57	11.55		
113	Secondary Education	2%		0.85	26.39		
114	Post-Secondary Education	8%		0.85	27.77		
121	Health, General	1%	2%	0.82	20.46		15.16
122	Basic Health	2%		1.18	24.06	11.64	
123	Non-communicable diseases (NCDs)	0%		0.14			
130	Population Policies/Programs & Reproductive Health	1%		1.73	23.33		

140	Water Supply & Sanitation	6%	3%	1.30	32.09	18.57	34.00
151	Government & Civil Society-general	8%		0.87	37.42		
152	Conflict, Peace & Security	3%		1.22	85.65	2.63	
160	Other Social Infrastructure & Services	2%		0.50	311.21	10.89	
210	Transport & Storage	2%	7%	1.96	75.60	5.49	30.80
220	Communications	0%	1%	0.20	4.25	21.71	24.57
231	Energy Policy	2%		0.98	76.21	6.57	
232	Energy generation, renewable sources	7%	9%	1.97	68.38	12.05	27.82
233	Energy generation, non-renewable sources	1%	1%	1.56	45.96	7.96	25.80
234	Hybrid energy plants	0%		4.80			
235	Nuclear energy plants	0%		0.03			
236	Energy distribution	3%		10.93	61.42	10.69	
240	Banking & Financial Services	7%	43%	1.75	53.96	14.24	23.97

250	Business & Other Services	2%	3%	1.17		13.08	14.85
311	Agriculture	3%	10%	0.99	27.20	14.43	21.59
312	Forestry	1%		1.26	12.11	8.21	
313	Fishing	0%		1.11			
321	Industry	1%	2%	0.40	18.08	10.87	12.30
322	Mineral Resources & Mining	0%		1.09	111.32		
323	Construction	0%	1%	0.11		6.62	22.57
331	Trade Policies & Regulations	1%		1.00	237.83	9.83	
332	Tourism	0%		0.18		5.30	
410	General Environment Protection	5%		1.69	41.42	19.43	
430	Other Multisector	6%		0.97	86.72	17.25	
510	General Budget Support	1%		12.64	37.66		
520	Development Food Assistance	1%		3.53			

530	Other Commodity Assistance	0%			2.75		
600	Action Relating to Debt	5%		62.49	27.97		
720	Emergency Response	5%		2.13	22.18		
730	Reconstruction Relief & Rehabilitation	2%		4.55			
740	Disaster Prevention & Preparedness	0%		0.68			
910	Administrative Costs of Donors	3%		13.57			
930	Refugees in Donor Countries	10%		156.21			
998	Unallocated / Unspecified	1%		0.68			
1000	Agnostic		11%				20.68
1001	Infrastructure		2%				28.40
1002	Start-up Promotion		5%				12.73

TABLE A1. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (GERMANY)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	1%	1%	0.22	62.58		27.47
112	Basic Education	1%		0.56	29.42		
113	Secondary Education	2%		0.76	24.72		
114	Post-Secondary Education	11%		1.64	11.38		
121	Health, General	1%	3%	0.45	34.14	10.50	17.17
122	Basic Health	1%		0.48	38.40		
123	Non-communicable diseases (NCDs)	0%		0.03			
130	Population Policies/Programs & Reproductive Health	1%		0.30	6.66		
140	Water Supply & Sanitation	7%	3%	0.20	50.54		60.87
151	Government & Civil Society-general	2%		0.19	70.13		

152	Conflict, Peace & Security	0%		0.55			
160	Other Social Infrastructure & Services	4%		0.29	65.32		
210	Transport & Storage	8%	5%	0.71	86.04		30.29
220	Communications	0%	1%	0.09	26.91		20.43
231	Energy Policy	1%		0.11	86.82		
232	Energy generation, renewable sources	3%	18%	0.27	49.74		28.94
233	Energy generation, non-renewable sources	0%	4%	1.07	47.24		46.45
234	Hybrid energy plants	0%			18.88		
235	Nuclear energy plants	0%		4.95			
236	Energy distribution	3%		1.10	67.15		
240	Banking & Financial Services	1%	45%	0.62	19.28	16.93	22.64
250	Business & Other Services	0%	1%	0.37	34.72		12.23
311	Agriculture	4%	8%	0.77	34.30		19.06

312	Forestry	0%		0.23	66.12		
313	Fishing	0%		0.13	28.63		
321	Industry	1%	2%	0.56	33.45	5.02	17.67
322	Mineral Resources & Mining	0%		0.20	301.81		
323	Construction	0%	1%	0.04			18.24
331	Trade Policies & Regulations	0%		0.46	236.04		
332	Tourism	0%		0.06	38.96		
410	General Environment Protection	6%		0.23	62.90		
430	Other Multisector	8%		0.35	66.12		
510	General Budget Support	4%		9.60	114.73		
520	Development Food Assistance	1%		0.67			
530	Other Commodity Assistance	0%		0.01			
600	Action Relating to Debt	11%		15.82	27.61		

720	Emergency Response	0%		0.43			
730	Reconstruction Relief & Rehabilitation	0%		0.27	20.37		
740	Disaster Prevention & Preparedness	0%		0.11			
910	Administrative Costs of Donors	5%		1.41			
930	Refugees in Donor Countries	5%		19.67			
998	Unallocated / Unspecified	4%		0.66	31.46		
1000	Agnostic		5%				15.48
1001	Infrastructure		1%				16.25
1002	Start-up Promotion		2%				7.98

TABLE A2. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (FRANCE)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	1%	0%	3.62			7.21
112	Basic Education	3%		8.69			
113	Secondary Education	0%		4.00			
114	Post-Secondary Education	3%		10.04			
121	Health, General	1%	0%	6.21			9.00
122	Basic Health	2%		7.68			
130	Population Policies/Programs & Reproductive Health	4%		4.34			
140	Water Supply & Sanitation	5%	1%	5.14			5.68
151	Government & Civil Society-general	9%		1.37			
152	Conflict, Peace & Security	4%		2.60			

160	Other Social Infrastructure & Services	2%		1.67			
210	Transport & Storage	0%	3%	2.67			13.63
220	Communications	0%	2%	1.48			30.46
231	Energy Policy	1%		5.66			
232	Energy generation, renewable sources	1%	22%	8.87			19.29
233	Energy generation, non-renewable sources		3%				29.25
236	Energy distribution	0%		11.63			
240	Banking & Financial Services	2%	42%	7.77			12.48
250	Business & Other Services	5%	1%	6.68			1.53
311	Agriculture	4%	13%	3.60			13.66
312	Forestry	0%		2.85			
313	Fishing	0%		0.94			
321	Industry	1%	2%	3.55			7.54

322	Mineral Resources & Mining	0%	1%	1.22			26.92
323	Construction	0%	0%	9.68			10.40
331	Trade Policies & Regulations	2%		10.22			
332	Tourism	0%	0%	0.39			2.70
410	General Environment Protection	2%	0%	2.31			7.15
430	Other Multisector	11%		6.89			
510	General Budget Support	2%		26.35			
520	Development Food Assistance	1%		4.80			
530	Other Commodity Assistance	0%		11.54			
600	Action Relating to Debt	5%		82.93			
720	Emergency Response	6%		4.74			
730	Reconstruction Relief & Rehabilitation	1%		8.58			
740	Disaster Prevention & Preparedness	0%		1.41			

910	Administrative Costs of Donors	6%		16.53			
930	Refugees in Donor Countries	10%		65.32			
998	Unallocated / Unspecified	6%		9.70			
1000	Agnostic		6%				13.48
1001	Infrastructure		1%				30.11
1002	Start-up Promotion		2%				5.24

TABLE A3. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (NETHERLANDS)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	3%	0%	0.91			23.35
112	Basic Education	3%		3.85			
113	Secondary Education	1%		1.80		2.93	
114	Post-Secondary Education	1%		0.33		5.65	
121	Health, General	5%	2%	2.08	0.03	1.40	39.04
122	Basic Health	5%		2.87		4.45	
130	Population Policies/Programs & Reproductive Health	5%		4.40			
140	Water Supply & Sanitation	2%		3.31		1.76	
151	Government & Civil Society-general	9%		0.62			
152	Conflict, Peace & Security	5%		0.79			

160	Other Social Infrastructure & Services	3%		1.74		2.86	
210	Transport & Storage	2%	2%	3.42		4.31	56.08
220	Communications	0%	1%	0.96		2.12	37.08
231	Energy Policy	1%		1.13		6.33	
232	Energy generation, renewable sources	1%	6%	2.30		2.59	33.17
233	Energy generation, non-renewable sources	1%	2%	5.08		6.82	43.26
235	Nuclear energy plants	0%					
236	Energy distribution	0%		2.82			
240	Banking & Financial Services	5%	11%	2.59	1.12	6.03	48.46
250	Business & Other Services	1%	1%	0.72		8.62	43.54
311	Agriculture	3%	4%	1.66		2.49	31.38
312	Forestry	1%		2.39		2.05	
313	Fishing	0%		0.58			

321	Industry	1%	1%	0.95	0.28	2.09	57.04
322	Mineral Resources & Mining	0%		0.38		1.11	
323	Construction	0%	4%	0.91		4.93	56.71
331	Trade Policies & Regulations	1%		1.20		2.25	
332	Tourism	0%		0.29		1.51	
410	General Environment Protection	5%		0.85			
430	Other Multisector	7%		1.52		5.19	
510	General Budget Support	4%		58.60			
520	Development Food Assistance	1%		3.44			
600	Action Relating to Debt	5%		27.99			
720	Emergency Response	9%		4.30			
730	Reconstruction Relief & Rehabilitation	1%		5.44			
740	Disaster Prevention & Preparedness	1%		1.97			

910	Administrative Costs of Donors	5%		1.91			
930	Refugees in Donor Countries	2%		31.31			
998	Unallocated / Unspecified	2%		2.69			
1000	Agnostic		50%				55.40
1001	Infrastructure		9%				171.30
1002	Start-up Promotion		6%				26.54

TABLE A4. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (UNITED KINGDOM)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	2%	0%	0.72		0.07	6.09
112	Basic Education	6%		1.94			
113	Secondary Education	0%		0.34			
114	Post-Secondary Education	1%		0.45			
121	Health, General	2%	0%	0.69		8.24	10.57
122	Basic Health	4%		1.11		0.14	
123	Non-communicable diseases (NCDs)	0%		0.08			
130	Population Policies/Programs & Reproductive Health	2%		0.67			
140	Water Supply & Sanitation	1%		0.57		0.16	
151	Government & Civil Society-general	12%		0.36		0.05	

152	Conflict, Peace & Security	6%		0.53			
160	Other Social Infrastructure & Services	2%		0.27		0.14	
210	Transport & Storage	0%	0%	0.33			9.68
220	Communications	0%		0.08		1.66	
231	Energy Policy	1%		0.60		1.66	
232	Energy generation, renewable sources	2%	52%	1.03		4.48	88.12
233	Energy generation, non-renewable sources	0%	0%	0.70			13.05
235	Nuclear energy plants	0%		0.80			
236	Energy distribution	1%		5.15		0.02	
240	Banking & Financial Services	1%	27%	0.28		3.60	24.75
250	Business & Other Services	3%	0%	1.91		6.58	7.12
311	Agriculture	3%	6%	0.73		1.32	12.65
312	Forestry	0%		0.49		0.15	

313	Fishing	1%		0.85		0.31	
321	Industry	1%		0.38		0.61	
322	Mineral Resources & Mining	1%		0.78			
323	Construction	0%	0%	0.05			3.03
331	Trade Policies & Regulations	0%		0.83			
332	Tourism	0%	0%	0.05		1.82	17.10
410	General Environment Protection	12%		1.81		0.12	
430	Other Multisector	6%		2.05			
510	General Budget Support	3%		27.61			
520	Development Food Assistance	0%		0.62			
530	Other Commodity Assistance	0%		0.14			
600	Action Relating to Debt	1%		13.90			
720	Emergency Response	10%		1.68			

730	Reconstruction Relief & Rehabilitation	1%		1.18			
740	Disaster Prevention & Preparedness	1%		0.84			
910	Administrative Costs of Donors	6%		14.85		10.44	
930	Refugees in Donor Countries	8%		10.14			
998	Unallocated / Unspecified	1%		0.25		0.02	
1000	Agnostic		11%				11.95
1002	Start-up Promotion		2%				7.27

TABLE A5. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (NORWAY)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	3%		3.04			
112	Basic Education	2%		2.84			
113	Secondary Education	0%		0.93			
114	Post-Secondary Education	1%		2.68			
121	Health, General	2%	1%	5.38			9.79
122	Basic Health	2%		2.40			
130	Population Policies/Programmes & Reproductive Health	2%		2.14			
140	Water Supply & Sanitation	4%	0%	3.31		1.54	2.75
151	Government & Civil Society-general	17%		1.24			

152	Conflict, Peace & Security	4%		1.26			
160	Other Social Infrastructure & Services	2%		1.56			
210	Transport & Storage	2%	5%	4.90			11.51
220	Communications	0%		1.84		1.69	
231	Energy Policy	1%		2.53		1.60	
232	Energy generation, renewable sources	1%	15%	2.83		4.43	9.73
233	Energy generation, non-renewable sources	0%	2%	1.89		1.57	6.00
235	Nuclear energy plants	0%		0.81			
236	Energy distribution	0%		5.80			
240	Banking & Financial Services	1%	9%	0.72		11.04	8.21
250	Business & Other Services	4%	8%	3.34		9.45	6.80
311	Agriculture	5%	27%	2.82		2.71	6.07
312	Forestry	0%		0.88			

313	Fishing	0%		1.92			
321	Industry	2%	13%	0.54		1.45	4.22
322	Mineral Resources & Mining	0%		0.60			
323	Construction	0%	2%				3.26
331	Trade Policies & Regulations	0%		1.01			
332	Tourism	0%	0%	1.23		2.01	1.22
410	General Environment Protection	5%		2.07			
430	Other Multisector	3%		2.45			
510	General Budget Support	3%		27.03			
520	Development Food Assistance	0%		2.31			
530	Other Commodity Assistance	0%					
600	Action Relating to Debt	2%		21.08			
720	Emergency Response	11%		2.20			

730	Reconstruction Relief & Rehabilitation	1%		1.47			
740	Disaster Prevention & Preparedness	0%		0.51			
910	Administrative Costs of Donors	6%		61.11			
930	Refugees in Donor Countries	8%		104.18			
998	Unallocated / Unspecified	6%		2.08		3.69	
1000	Agnostic		15%				8.00
1001	Infrastructure		2%				12.68
1002	Start-up Promotion		0%				2.12

TABLE A6. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (DENMARK)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	3%		0.85			
112	Basic Education	2%		0.43			
113	Secondary Education	0%		0.16			
114	Post-Secondary Education	1%		1.20			
121	Health, General	2%	5%	0.88		2.50	13.91
122	Basic Health	2%		0.41			
123	Non-communicable diseases (NCDs)	0%		0.06			
130	Population Policies/Programs & Reproductive Health	1%		0.71			
140	Water Supply & Sanitation	5%		1.57		1.60	
151	Government & Civil Society-general	10%		0.34			

152	Conflict, Peace & Security	5%		0.68			
160	Other Social Infrastructure & Services	3%		0.29			
210	Transport & Storage	0%	2%	0.76			4.45
220	Communications	2%	7%	0.62		3.43	13.02
231	Energy Policy	0%		0.67			
232	Energy generation, renewable sources	3%	20%	1.54	0.14	6.01	10.81
233	Energy generation, non-renewable sources	0%	7%	0.34		0.23	9.57
235	Nuclear energy plants	0%		0.28			
236	Energy distribution	1%		3.48		1.46	
240	Banking & Financial Services	2%	26%	1.03	1.89	5.57	9.76
250	Business & Other Services	2%	1%	1.05			3.04
311	Agriculture	3%	21%	0.70	1.89	2.49	7.11
312	Forestry	5%		1.56		4.69	

313	Fishing	0%		1.28			
321	Industry	1%	2%	0.16	15.11	2.34	2.15
322	Mineral Resources & Mining	0%		0.80			
323	Construction	0%		0.05			
331	Trade Policies & Regulations	1%		1.28		10.28	
332	Tourism	0%		0.07		5.08	
410	General Environment Protection	3%		0.47			
430	Other Multisector	6%		0.85		2.22	
510	General Budget Support	3%		14.56			
520	Development Food Assistance	0%		0.69			
530	Other Commodity Assistance	0%		0.03			
600	Action Relating to Debt	0%		1.36			
720	Emergency Response	10%		1.29			

730	Reconstruction Relief & Rehabilitation	2%		2.61			
740	Disaster Prevention & Preparedness	0%		0.30			
910	Administrative Costs of Donors	8%		0.79			
930	Refugees in Donor Countries	5%		4.76			
998	Unallocated / Unspecified	7%		0.47		7.72	
1000	Agnostic		3%				9.05
1002	Start-up Promotion		5%				3.52

TABLE A7. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (FINLAND)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	1%		0.07			
112	Basic Education	0.2%		0.07			
113	Secondary Education	2%		0.37			
114	Post-Secondary Education	15%		0.62			
121	Health, General	4%		0.62			
122	Basic Health	1%		0.27			
123	Non-communicable diseases (NCDs)	0.0%		0.02			
130	Population Policies/Programs & Reproductive Health	0.2%		0.15			
140	Water Supply & Sanitation	3%	1%	0.63			10.99
151	Government & Civil Society-general	4%		0.39			

152	Conflict, Peace & Security	1%		0.39			
160	Other Social Infrastructure & Services	2%		0.14			
210	Transport & Storage	1%	1%	1.55			11.25
220	Communications	0.1%	1%	0.17			14.16
231	Energy Policy	1%		0.56			
232	Energy generation, renewable sources	1%	21%	0.41		6.34	18.77
233	Energy generation, non-renewable sources	0.0%	3%	0.05			18.44
235	Nuclear energy plants	0.0%		3.70			
236	Energy distribution	0.0%		0.32			
240	Banking & Financial Services	1%	49%	0.48		4.55	18.25
250	Business & Other Services	1%		0.95			
311	Agriculture	2%	6%	0.25			19.06
312	Forestry	0.2%		0.30			

313	Fishing	0.0%		0.06			
321	Industry	1%	3%	0.35		8.41	16.84
322	Mineral Resources & Mining	0.0%		0.02			
323	Construction	0.0%		0.22			
331	Trade Policies & Regulations	0.0%		0.12			
332	Tourism	0.3%		0.27			
410	General Environment Protection	1%		0.18			
430	Other Multisector	3%		0.29		4.99	
510	General Budget Support	0.2%		3.47			
520	Development Food Assistance	0.1%		0.37			
530	Other Commodity Assistance	0.0%		0.24			
600	Action Relating to Debt	27%		46.95			
720	Emergency Response	3%		0.33			

730	Reconstruction Relief & Rehabilitation	0.3%		0.23			
740	Disaster Prevention & Preparedness	0.2%		0.28			
910	Administrative Costs of Donors	4%		2.68			
930	Refugees in Donor Countries	17%		77.24			
998	Unallocated / Unspecified	2%		0.18			
1000	Agnostic		13%				17.12
1001	Infrastructure		3%				26.25
1002	Start-up Promotion		0%				2.16

TABLE A8. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (AUSTRIA)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	2%	1%	0.45			9.85
112	Basic Education	1%		0.61			
113	Secondary Education	2%		0.46	9.29		
114	Post-Secondary Education	5%		0.70			
121	Health, General	4%	0%	0.67	8.06		3.14
122	Basic Health	4%		0.56	4.48		
130	Population Policies/Programs & Reproductive Health	1%		0.31			
140	Water Supply & Sanitation	4%		0.62	8.81		
151	Government & Civil Society-general	7%		0.40	1.72		
152	Conflict, Peace & Security	1%		0.28			

160	Other Social Infrastructure & Services	3%		0.14	7.25		
210	Transport & Storage	2%		0.76	8.61		
220	Communications	0%	0%	0.33	4.12		0.66
231	Energy Policy	0%		1.42			
232	Energy generation, renewable sources	1%	23%	1.75	8.30		9.42
233	Energy generation, non-renewable sources	0%	7%	2.41	7.23		17.96
235	Nuclear energy plants	0%		0.18			
236	Energy distribution	1%		3.64	6.33		
240	Banking & Financial Services	3%	45%	0.88			6.08
250	Business & Other Services	1%	1%	2.59			4.68
311	Agriculture	7%	7%	0.38			3.69
312	Forestry	0%		0.24			
313	Fishing	0%		0.37	5.34		

321	Industry	1%		0.33			
322	Mineral Resources & Mining	0%		0.17			
323	Construction	0%		0.03			
331	Trade Policies & Regulations	0%		0.65			
332	Tourism	0%		0.10			
410	General Environment Protection	1%		0.44	6.48		
430	Other Multisector	7%		0.53	10.93		
510	General Budget Support	0%		4.55			
520	Development Food Assistance	0%		0.45			
530	Other Commodity Assistance	0%		4.76			
600	Action Relating to Debt	9%		14.08	2.00		
720	Emergency Response	8%		1.13			
730	Reconstruction Relief & Rehabilitation	1%		1.10			

740	Disaster Prevention & Preparedness	0%		0.62			
910	Administrative Costs of Donors	6%		2.47			
930	Refugees in Donor Countries	11%		62.88			
998	Unallocated / Unspecified	5%		0.17			
1000	Agnostic		13%				6.74
1002	Start-up Promotion		3%				4.34

TABLE A9. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (BELGIUM)

Sectorcode	Sectorname	ODA Share	DFI Share	ODA Commitments per Project (2018 Million USD)			DFI Commitments per Project (2018 Million USD)
				ODA Grant	ODA Loan	Equity Investment	
111	Education, Level Unspecified	1%	2%	0.37		8.79	7.61
112	Basic Education	1%		0.60			
113	Secondary Education	2%		0.81			
114	Post-Secondary Education	1%		0.16		2.11	
121	Health, General	1%	2%	0.58		7.97	9.53
122	Basic Health	2%		0.61			
123	Non-communicable diseases (NCDs)	0%		0.15			
130	Population Policies/Programs & Reproductive Health	1%		0.59			
140	Water Supply & Sanitation	5%		0.96			
151	Government & Civil Society-general	10%		0.38			

152	Conflict, Peace & Security	4%		0.23			
160	Other Social Infrastructure & Services	1%		0.35			
210	Transport & Storage	1%		1.97			
220	Communications	0%		0.44			
231	Energy Policy	1%		1.30			
232	Energy generation, renewable sources	0%	8%	1.41		6.32	8.82
233	Energy generation, non-renewable sources	0%		4.23			
234	Hybrid energy plants	0%					
235	Nuclear energy plants	0%		0.76			
236	Energy distribution	0%		4.82			
240	Banking & Financial Services	3%	23%	1.35		9.74	8.87
250	Business & Other Services	1%		1.20		9.47	
311	Agriculture	4%	2%	0.72			9.21

312	Forestry	0%		1.14		10.99	
313	Fishing	0%		0.01			
321	Industry	2%		0.97		7.34	
322	Mineral Resources & Mining	0%		1.07		10.99	
331	Trade Policies & Regulations	1%		1.30			
332	Tourism	0%		1.40			
410	General Environment Protection	3%		0.60		5.97	
430	Other Multisector	9%		0.45		7.22	
510	General Budget Support	1%		15.06			
520	Development Food Assistance	0%		0.09			
530	Other Commodity Assistance	0%		3.36			
600	Action Relating to Debt	2%		22.63			
720	Emergency Response	12%		0.59			

730	Reconstruction Relief & Rehabilitation	1%		0.35			
740	Disaster Prevention & Preparedness	1%		0.44			
910	Administrative Costs of Donors	6%		0.82			
930	Refugees in Donor Countries	17%		56.62			
998	Unallocated / Unspecified	5%		1.58			
1000	Agnostic		54%				9.69
1001	Infrastructure		3%				13.24
1002	Start-up Promotion		6%				6.54

TABLE A10. SECTORAL DECOMPOSITION OF ODA AND DFI INVESTMENTS (SWITZERLAND)

국문초록

공적개발원조와 비교한 개발금융의 역할과 공여국의 민간부문개발 연관성

본 연구에서는 유럽 개발금융기관의 역할을 규명하는 동시에 그들의 사업이 공여국 민간부문개발과 어떠한 연관성을 보이는 지를 알아보기 위해 개발금융기관들의 포트폴리오를 바탕으로 실증분석을 진행한다. 먼저, 분석에 해당된 유럽 공여국들을 각 나라별로 공적개발원조와 그 나라 해당 개발금융기관의 투자를 비교 분석한다. 그 결과, 공적개발원조와 개발금융기관 투자는 서로 다른 분야에서 진행되고 있으며, 이에 따라 서로를 상호보완하고 있는 것으로 나타났다. 예외적으로 독일은 두 수단 모두에게 중요한 공통 부문이 존재하였지만, 기본적으로는 다른 나라들과 마찬가지로 기능이 서로 분립되어 있는 것을 확인할 수 있다.

개발금융기관의 투자와 공여국 민간부문개발은 그 연관성이 깊은 것으로 나타났다. 구체적으로 영국, 노르웨이 그리고 덴마크의 사례는 개발금융기관의 투자활동이 해당 공여국의 민간부문개발과 긴밀히 관련되어 있다는 것을 뒷받침한다. 특히, 노르웨이와 덴마크는 자국의 이해가 반영된 사업에서 다른 나라들에 비해 주식투자의 비중이 압도적으로 높았다. 이러한 사실은 이 두 나라가 다른 나라들 보다 더 적극적이고 명시적으로 자국의 이해를 개발금융기관 사업을 통해 추구하고 있음을 보여준다. 가용한 자료의 한계가 존재하여 개별 프로젝트별로 고려된 모든 이해관계를 파악하는 데에 한계가 존재하였음에도 불구하고, 다른 공여국들에서도 상기 제시된 연관 관계를 볼 수 있음을 추가적으로 확인할 수 있다.

주제어: 개발금융, 개발금융기관, 민간부문개발, 공여국 민간부문
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